

Materials List for

Generation of Human Blood Vessel Organoids from Pluripotent Stem Cells

Nicolas Werschler^{1,2}, Josef Penninger^{1,2,3,4}

¹School of Biomedical Engineering, University of British Columbia ²Life Sciences Institute, University of British Columbia ³Department of Medical Genetics, University of British Columbia ⁴Institute of Molecular Biotechnology of the Austrian Academy of Sciences (IMBA)

Corresponding Author

Nicolas Werschler
nico.werschler@ubc.ca

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Materials

Name	Company	Catalog Number	Comments
1 M HEPES	Gibco	15630080	
2-Mercaptoethanol	Millipore	60-24-2	
7.5% sodium bicarbonate	Gibco	5080094	
Accutase	Gibco	A1110501	cell dissociation reagent
Albumin fraction V (BSA)	AppliChem	A1391, 0100	
Alexa Fluor 488-anti-rabbit IgG (Fab '2 fragment	—	Jackson Immuno Research	711-546-152
Alexa Fluor 488-anti-sheep IgG	—	Life Technologies	A11015
Alexa Fluor 647-anti-goat IgG (Fab '2 fragment	—	Jackson Immuno Research	705-606-147
Automated cell counter	Invitrogen		Countess II
B27 supplement	Gibco	12587010	
Biological safety cabinet	Faster		SafeFAST Premium 212
BMP4	Miltenyi BioTec	130-111-165	
CD31	Endothelial cell	DAKO	M0823
CD31	Endothelial cell	R&D	AF806
Cellulose wipes			
Centrifuge	Heraeus		Multifuge 4 KR
CHIR99021	Tocris Bioscience	4423	
Clear nail polish (essence, the gel, 01 absolute pure)			
CO ₂ incubator	New Brunswick		Galaxy 170S
Collagen type IV	Basement membrane	Millipore	AB769
Confocal microscope (10x, 20x, 63x objectives)	Leica		SP8
Counting chamber slides- including 0.1% Trypan blue	Invitrogen	C10283	
Coverslips (22 x 50 mm)			

Cy3-anti-mouse IgG (Fab '2 fragment	—	Jackson Immuno Research	715-166-150
DAPI	Sigma	D9542	
DMEM/F12	Gibco	11330-032	
Dulbecco's Modified Eagle's Medium (DMEM)	Sigma	D5648-10L	
Eppendorf tubes			
Falcon tubes	Fisher Scientific	14-432-22	
Fetal Bovien Serum (FBS)	Gibco	10270-106	
FGF2	Miltenyi BioTec	130-093-841	
Fine forceps	FST	11254-20	
Fisherbrand Superfrost Clipped Corner Slides	Fisher Scientific	12-550-016	
Forskolin	Sigma	F3917	
Geltrex LDEV-Free, hESC-Qualified, Reduced Growth Factor Basement Membrane Matrix	Fisher Scientific	A1413302	
Glutamax	Gibco	35050061	
Ham's F12	Gibco	11765054	
Horizontal laminar flow station, if stereomicroscope cannot fit in BSC	Thermo Scientific		Heraguard
Inverted contrasting tissue culture microscope	Zeiss		Vert.A1
iSpacer	SunJinLab	IS009	
KnockOut DMEM/F12	Gibco	12660012	
KnockOut Serum Replacement	Gibco	10828028	
N2 supplement	Gibco	17502048	
Neurobasal medium	Gibco	21103049	
non-essential amino acids (NEAAs)	Gibco	11140035	
Orbital shaker			
Parafilm			
Paraformaldehyde (4%) in PBS	Boston BioProducts	BM-155	
PDGFR-β	Pericyte	R&D	AF385
PDGFR-β	Pericyte	Cell Signaling	3169S
Penicillin-streptomycin	Gibco	15140122	
pH indicator strips (6.5-10)	Mquant, Millipore	109543	
Phosphate buffered saline (PBS)	Gibco	10010023	
Pipettes (P1000, P200 and P20)	Gilson, Integra Pipetboy		
Prime Surface-U 96-well plates	Sumilon	MS9096-U	
PurCol	Advanced BioMatrix	5005	
RapiClear CS gel	SunJinLab	RCCS005	
RapiClear CS mounting solution	SunJinLab	RCCS002	
Serological pipettes (5, 10 and 25 mL)	Falcon	357529, 357530, 357515	
SMA	vSMC/Pericyte	Sigma	2547
Sodium deoxycholate	Sigma	D6750	
Sodium hydroxide solution (NaOH, 1.0 N)	Sigma	S2770	
Solubilized Basement Membrane Matrix (i.e., Matrigel)	Corning	356231	

Stainless steel micro spatula (rounded end)	Fisher Scientific	21-401-5	
Stainless steel spoon (double-ended)	Fisher Scientific	BelArt H367290018	
Stemflex medium	Thermo Scientific	A3349401	stem cell culture medium
StemPro-34 SFM	Gibco	10639011	flexible serum-free medium
Stereomicroscope	Zeiss	Stemi 2000	
Sterile filter pipette tips (1,000, 300 and 20 μ L)	Biozym, Surphob	VT0270, VT0250, VT0220	
Tissue culture-treated 12-well plates TC	BD Falcon	353043	
Tissue culture-treated 6-well plates	Eppendorf	30720113	
Triton X-100	Sigma	93420	
Tryple Express Enzyme (1x), Phenol Red	Thermo Scientific	12605010	mammalian cell dissociating enzyme
Tween 20	Sigma	P7949	
Ultra-low-attachment 6-well plates	Corning	3471	
VEGFA	Peprotech	100-20	
Water bath (37 °C)	Fisher Scientific		Isotemp 210
Y-27632	Calbiochem	688000	